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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of operating a telephony service provider system for providing a media session channel for communication of real time streaming media data from a remote caller client to a callee client served by an address translation firewall, the method comprising:

receiving a ping datagram, the ping datagram being originated by the callee client, addressed to the telephony service provider system, and having its source network address and source port number translated by the address translation firewall, the ping datagram further including identification of that identifies the callee client;

extracting a translated source network address and a translated source port number from the ping datagram to identify an open signaling channel to the callee client from the telephone service provider system that can be reverse translated by the address translation firewall;

receiving a session signaling message initiated by a remote caller client from a remote device, the session signaling message identifying the callee client and including a identifying a caller network address and a caller port number established by the remote caller client for receipt of media session datagrams;

determining a designated network address and designated port number to which the callee client is to send media session datagrams, the designated network address and the designated port number being:

the caller network address and the caller port number if the caller network address as identified in the session signaling message matches an extracted source address extracted from the session signaling message; and

a relay server network address and a relay server port number if the caller network address as identified in the session signaling message is different than the extracted source address extracted from the session signaling message;

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and

sending a client session signaling message to the callee client on the open signaling channel by utilizing the translated source network address and translated source port number in response to receipt of the session signaling message from the remote caller client, device the client session signaling message including identification of the designated network address and designated port number.

2. (Canceled)

3. (Currently Amended) The method of claim 1, 2, further comprising:

receiving a response message, the response message being originated by the callee client, addressed to the telephony service provider system, and having its source network address and source port number translated by the address translation firewall, the response message including identification of that includes a client network address and a client port number for receipt of media session datagrams; and

~~determining a caller designated network address and a caller designated port number to which the caller is to send media session datagrams, the caller designated network address and the caller designated port number being:~~

~~the client designated network address and the client designated port number if the caller network address matches the remote device source network address; and~~

~~a relay server network address and a relay server port number if the caller network address does not match the remote device source network address; and~~

sending a remote device response message to the remote caller client, device the remote device response message being the response message originated by the callee client with identification of a relay server network address and a relay server port number substituted for the client network address and client port number identified in the response message. that includes the caller

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~~designated network address and the caller designated port number.~~

4. (Currently Amended) A method operating a telephony service provider system for facilitating the ~~of~~ sending a call signaling message to a callee client independent of whether the callee client is served an address translation firewall, the method comprising:

receiving a registration message, the registration message being originated by from the callee client, addressed to the telephony service provider system, and including identification of the callee client and ~~the registration message identifying a~~ network address of the callee client;

extracting a source network address and a source port number from the registration message;

comparing the network address of the callee client identified in the registration message ~~a designated network address~~ to the extracted source network address;

receiving a directory inquiry message from a remote caller client device identifying the callee client;

providing a directory inquiry response message to the remote caller client device, the directory inquiry response message including a signaling address, the signaling address being:

the network address identified in the registration message if the network address and the source network address are the same network address; and

a directory server network address if the network address and the source network address are not the same, the directory server network address being a network address of a telephony service system.

5. (Currently Amended) The method of claim 4, further comprising:

receiving a session signaling message from a remote caller client device, the session signaling message identifying the callee client as the destination device; ~~and for the client;~~ and

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sending a client session signaling message to the callee client by
addressing the session signaling message to: i) the network address identified in
the registration message if the network address and source network address are
the same; and ii) to the source network address and source port number from the
registration message if the network address identified in the registration message
is different than the source network address. ~~utilizing the source network address~~
~~and the source port number.~~

6. (Currently Amended) The method of claim 5, wherein:

the session signaling message includes identification of a caller network
address and a caller port number established by the remote caller client for receipt
of media session datagrams; and

the method further includes:

extracting a remote device source network address and a remote device
source port number from the session signaling message;

determining whether the caller network address matches the remote
device source network address;

determining a designated network address and a designated port
number to which the callee client is to send media session datagrams, the
designated network address and the designated port number being:

the caller network address and the caller port number if the caller
network address matches the remote device source network address; and

a relay server network address and a relay server port number if the
caller network address does not match the remote device source network address;
and

wherein the client session signaling message includes identification of the
designated network address and designated port number.

7. (Canceled)

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8. (Currently Amended) The method of claim 4, further comprising:
assigning a session identifier to the session in response to the directory inquiry;
associating the session identifier to the remote caller client and the identified callee client; and
providing the session identifier to the remote caller client device in the directory inquiry response message;
9. (Currently Amended) The method of claim 8, further comprising:
receiving a session signaling message from the remote caller client device
the session signaling message identifying the includes the session identifier;
identifying the callee client to which the session identifier is associated; and
sending a client session signaling message to the callee client by
addressing the client session signaling message to the utilizing the source network
address and source port number from the registration message sent by the callee
client associated with the session identifier.
10. (Currently Amended) The method of claim 9, wherein:
the session signaling message includes identification of a caller network address and a caller port number established by the remote caller client for receipt of media session datagrams; and
the method further comprises:
determining whether the caller network address matches a remote device source network address;
determining a designated network address and designated port number to which the callee client is to send media session datagrams, the designated network address being:
the caller network address and the caller port number if the caller network address matches the remote device source network address; and
a relay server network address and a relay server port number if the

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caller network address does not match the remote device source network address;
and

wherein the client session signaling message includes identification of the designated network address and the designated port number.

11. (Canceled)

12. (Currently Amended) A directory director-server for providing a media session channel for communication of real time streaming media data from a remote caller client to a callee client served by an address translation firewall, the directory server comprising:

means for receiving a ping datagram, the ping datagram being originated by the callee client, addressed to the directory server, and having its source network address and source port number translated by the address translation firewall, the ping datagram further including identification of that identifies the callee client;

means for extracting a translated source network address and a translated source port number from the ping datagram to identify an open signaling channel to the callee client form the directory server that can be reverse translated by the address translation firewall;

means for receiving a session signaling message initiated by the remote caller client, from a remote device the session signaling message identifying the callee client and identifying a including a caller network address and a caller port number established by the remote caller client for receipt of media session datagrams;

means for determining a designated network address and a designated port number to which the callee client is to send media session datagrams, the designate network address and the designated port number being:

the caller network address and the caller port number if the caller network address as identified in the session signaling message matches an extracted source network address extracted from the session signaling message;

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and

a relay server network address and a relay server port number if the caller network address as identified in the session signaling message is different than the extracted source network address extracted from the session signaling message; and

means for sending a client session signaling message to the callee client on the open signaling channel by utilizing the translated source network address and translated source port number in response to receipt of the session signaling message from the remote caller client, device the client session signaling message including identification of the designated network address and designated port number.

13. (Canceled)

14. (Currently Amended) The directory server of claim 12, 13, further comprising:

means for receiving a response message, the response message being originated by the callee client, addressed to the directory server, and having its source network address and source port number translated by the address translation firewall, the response message including identification of that includes a client network address and a client port number for receipt of media session datagrams; and

~~means for determining a caller designated network address and a caller designated port number to which the caller is to send media session datagrams, the caller designated network address and the caller designated port number being:~~

~~the client designated network address and the client designated port number if the caller network address matches the remote device source network address; and~~

~~a relay server network address and a relay server port number if the~~

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~~caller network address does not match the remote device source network address;~~
and

means for sending a remote device response message to the remote caller client, device the remote device response message being the response message originated by the callee client with identification of a relay server network address and a relay server port number substituted for the client network address and client port number identified in the response message. ~~that includes the caller designated network address and the caller designated port number.~~

15. (Currently Amended) A directory server for facilitating the sending a call signaling message to a callee client independent of whether the callee client is served an address translation firewall, the directory server comprising:

means for receiving a registration message, the registration message being originated by from the callee client, addressed to the directory server, and including identification of the callee client and the registration message identifying a network address of the callee client;

means for extracting a source network address and a source port number from the registration message;

means for comparing the network address of the callee client identified in the registration message ~~a designated network address~~ to the extracted source network address;

means for receiving a directory inquiry message from a remote caller client device ~~identifying the callee client;~~

means for providing a directory inquiry response message to the remote caller client, device, the directory inquiry response message including a signaling address, the signaling address being:

the network address identified in the registration message if the network address and the source network address are the same network address; and

a directory server network address if the network address and the source network address are not the same, the directory server network address being a

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network address of the directory server.

16. (Currently Amended) The directory server of claim 15, further comprising:

means for receiving a session signaling message from a remote device
caller client, the session signaling message identifying the callee client as the
destination device; and for the client; and

means for sending a client session signaling message to the callee client by
addressing the session signaling message to: i) the network address identified in
the registration message if the network address and source network address are
the same; and ii) to the source network address and source port number from the
registration message if the network address identified in the registration message
is different than the source network address. utilizing the source network address
and the source port number.

17. (Currently Amended) The directory server of claim 16, wherein:

the session signaling message includes identification of a caller network
address and a caller port number established by the remote caller client for receipt
of media session datagrams; and

the directory server further comprises:

means for extracting a remote device source network address and a
remote device source port number from the session signaling message;

means for determining whether the caller network address matches the
remote device source network address;

means for determining a designated network address and designated
port number to which the callee client is to send media session datagrams, the
designated network address and the designated port number being:

the caller network address and the caller port number if the caller
network address matches the remote device source network address; and

a relay server network address and a relay server port number if the
caller network address does not match the remote device source network address;

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and

wherein the client session signaling message includes identification of the designated network address and designated port number.

18. (Canceled)

19. (Currently Amended) The directory server of claim 15, 5, further comprising:
means for assigning a session identifier to the session in response to the directory inquiry;

means for associating the session identifier to the remote caller client and the identified callee client; and

means for providing the session identifier to the remote caller client device in the directory inquiry response message;

20. (Currently Amended) The directory server of claim 19, further comprising:
means for receiving a session signaling message from the remote ~~device~~ caller client, the session signaling message identifying includes the session identifier;

means for identifying the callee client to which the session identifier is associated; and

means for sending a client session signaling message to the callee client by addressing the client session signaling message to the ~~utilizing~~ the source network address and source port number from the registration message sent by the client associated with the session identifier.

21. (Currently Amended) The directory server of claim 20, wherein:
the session signaling message includes identification of a caller network address and a caller port number established by the remote caller client for receipt of media session datagrams; and

the directory server further comprises:

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means for determining whether the caller network address matches a remote device source network address;

means for determining a designated network address and designated port number to which the callee client is to send media session datagrams, the designated network address being:

the caller network address and the caller port number if the caller network address matches the remote device source network address; and

a relay server network address and a relay server port number if the caller network address does not match the remote device source network address; and

wherein the client session signaling message includes identification of the designated network address and the designated port number.

22. (Canceled)